SulTRAC

June 9, 2011

Mr. Pankaj Parikh
Project Officer (SM-5J)
U.S. Environmental Protection Agency Region 5
77 W. Jackson Blvd.
Chicago, IL 60604

Subject: **North Bronson Industrial Area Superfund Site**
Work Plan for Remedial Design Oversight
Remedial Action Contract (RAC) 2 for Remedial, Enforcement Oversight, and Non-time Critical Removal Activities in Region 5
Work Assignment No. 121-ROBE-051C

Dear Mr. Parikh:

SulTRAC is submitting the work plan for the above-referenced work assignment for your review. SulTRAC has estimated a total cost of $146,247 to complete the activities described in the SOW. The cost estimate information provided is business confidential.

If you have any questions regarding this work plan, please call me at (312) 201-7460.

Sincerely,

Mindy Gould

Mindy Gould
SulTRAC Program Manager

Enclosure

cc: Thomas Harrison, EPA Contracting Officer
James Hahnenberg, EPA Work Assignment Manager
Greg Hass, SulTRAC Project Manager

WORK PLAN

FOR REMEDIAL DESIGN OVERSIGHT
NORTH BRONSON INDUSTRIAL AREA SUPERFUND SITE
BRONSON COUNTY, MICHIGAN

Prepared for
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Work Assignment No.	:	121-ROBE-051C
EPA Region	:	5
Date Prepared	:	June 9, 2011
Contract No.	:	EP-S5-06-02
Prepared by	:	SulTRAC
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1.0 INTRODUCTION

SulTRAC has prepared this work plan for the United States Environmental Protection Agency (EPA) Region 5 under Work Assignment (WA) No. 121-ROBE-051C, Response Action Contract 2 (RAC 2) No. EP-S5-06-02. The initial WA form for WA 021-ROBE-051C was signed by the EPA contracting office on February 22, 2007. SulTRAC participated in a kickoff meeting with EPA on March 7, 2007. This work plan details SulTRAC's understanding of the tasks described in the new statement of work (SOW) of the WA and the associated assumptions used for deriving estimated costs to perform the work (EPA 2011). Estimated costs to complete the work are presented in the appendix to this work plan.

1.1 Site Description

The North Bronson Industrial Area Superfund Site (NBIA Site) is located in Branch County, Bronson, Michigan. The NBIA Site consists of two manmade lagoon areas and a county drain. Both the western and eastern lagoonal areas each consist of five main lagoons. However, the eastern lagoons have a history of excavation and backfilling, and currently only two of the original eastern lagoons are visible. County Drain #30 (CD #30) is a manmade drainage ditch, located 10-50 feet north of the lagoons. CD #30 originates at a marsh 0.5 miles northeast of the NBIA Site and flows in a westerly direction for about 2 miles before discharging into Swan Creek, 1.5 miles northwest of the NBIA Site.

Contamination at the NBIA Site is a result of industrial activities and waste-handling practices in the northern Bronson area since the early 1900s. Initially, many Bronson-based industries discharged their wastes directly into CD #30 from industrial sewers, which eventually caused harm to the surrounding fauna. In response, the City of Bronson constructed two lagoon areas to reduce the amount of contamination entering CD #30. The western and eastern lagoons were built in 1938 and 1949, respectively, to contain the metal-laden plating and other wastes generated by the industries in this area. The following companies are connected to the eastern and western lagoons via industrial sewer lines and have an industrial waste disposal legacy associated with NBIA:

- L.A. Darling Company (L.A. Darling): L.A. Darling operated from early 1900s until 1967. It manufactured display fixtures and retail shelving, which included cadmium and chromium plating operations. The company discharged liquid wastes into the western lagoons between 1939 and 1949. Between 1949 and 1967, L.A. Darling disposed wastes into the eastern lagoons. The company ceased operations in the Bronson area in 1967. The contamination located at the former L.A. Darling Facility was considered separately by the EPA under WA 024-RSBD-B5Y1.

- Douglas Components Corporation (DCC): DCC began operations in 1910. It designed and manufactured automobile electrical parts, which included cadmium, chromium, silver, tin and zinc metal-plating operations. Subsequent additions to DCC included a cyanide destruction facility which began operating in 1951.

- Bronson Reel Company (Bronson Reel): Bronson Reel began manufacturing fishing reels in 1922. It had a machine shop to make its own dies, tools, and fixtures, which included anodizing and plating. Bronson Reel stopped making reels and began making bomb parts in 1945. Bronson Reel discharged liquid wastes to the western lagoons from 1939 until 1960. Successor companies at the Bronson Reel building continued to discharge small amounts of non plating wastes to the

western lagoons until 1980. The contamination located at the former Bronson Reel Facility was considered separately by the EPA under WA 024-RSBD-B5Y1.

- Bronson Plating Company (BPC): Established in 1946, BPC performed nickel and chrome plating, buffing, and polishing operations. BPC discharged liquid wastes into the western lagoons from 1946 to 1949, at which point, it started discharging to the eastern lagoons. BPC continued to dispose liquid wastes into the eastern lagoons until 1981.

- Bronson Specialties Incorporated (Bronson Specialties): Bronson Specialties was established in 1956 and had three divisions; Bronson Plastics, Bronson Tool, and Bronson Products. Operations at these three divisions included production of fiberglass seats, train parts, fuel tanks for pickup trucks, and specialty machines. These facilities used degreaser chemicals, screw machines, casting machines, and turning shops. Methyl ethyl ketone was used and stored at the facility.

- Scott Fetzer Components Corporation (Scott Fetzer): Scott Fetzer purchased a division of DCC in 1960 and continued operations as the Douglas Division of Scott Fetzer until 1984. The contamination located at the former Scott Fetzer Facility was considered separately by the EPA under WA 024-RSBD-B5Y1.

The western lagoons, which are currently owned by the City of Bronson, were used until 1980. L.A. Darling, Bronson Reel, DCC, and BPC discharged wastes to the western lagoons between 1939 and 1960. The eastern lagoons, which are approximately 1500 feet east of the western lagoons, received wastes from Scott Fetzer, L.A. Darling, and BPC until 1951, 1967, and 1981, respectively. BPC purchased the eastern lagoons from the City of Bronson in 1970. BPC has subsequently backfilled the eastern lagoons and constructed buildings in this area; although, the dry remains of two of the original lagoons are still visible. The eastern and western lagoons are no longer used for waste disposal; however, the lagoons contain an estimated 130,000 cubic yards of heavy metal sludges.

The majority of the city of Bronson is within a one-mile radius of the NBIA Site. The surrounding area is mixed industrial and residential property, while north of the site is primarily rural. The Bronson area geology consists of surficial silt, clay, and sands 0 to 17 feet below ground surface (bgs) (upper aquifer), silt and clay from 17 to 50 feet bgs (assumed aquitard), and sand and gravel from 50 to 100 feet (lower aquifer). The depth to the water table at the site ranges from 3 to 9 feet bgs. Local groundwater flow is affected by CD #30 within the site area. Groundwater flow direction in the upper aquifer is north-northeast and changes to south-southeast just north of CD #30. Municipal wells are located upgradient of the NBIA Site. The majority of the residents in the immediate vicinity of the NBIA Site are connected to the municipal water supply system, though an estimated 3,000 people within three miles of the site use wells as a source of drinking water. The primary supply wells are located approximately 5,000 feet west of the NBIA Site and are screened in the upper aquifer.

Contaminants detected at the site are found in several media (see Table 1). Presented below is a description of contaminations found at the site based on specific areas in the NBIA Site:

- Eastern Lagoons: Metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and polychlorinated biphenyls (PCBs) were detected in soils and sludges. Chlorinated ethenes, such as trichloroethene (TCE), 1,2-dichloroethene (1,2-DCE), and vinyl chloride (VC), were detected in groundwater below the eastern lagoons.

- Western Lagoons: Metals and chlorinated ethenes were detected in the western lagoon sludges and soils. High concentrations of metals, as well as the chlorinated ethenes, TCE, 1,2-DCE, and VC were detected in groundwater wells at and downgradient of the western lagoons.

- CD #30: High concentrations of polycyclic aromatic hydrocarbons (PAHs), PCBs, and metals were detected in CD #30 sediments. These contaminants were detected at greatest concentrations adjacent to, and downstream of, the western lagoons. Organic compounds detected in the surface water at CD # 30 were below the selected Ambient Water Quality Criteria (AWQC) in the Record of Decision (ROD) (EPA 1998). Among the metals detected in the surface water, cadmium and mercury exceeded the AWQC.

- Abandoned Industrial Sewer: High concentrations of metals, TCE, 1,2-DCE, and VC, were detected in subsurface soils and groundwater along the route of the abandoned industrial sewer.

Accidental ingestion of or direct contact with the contaminated groundwater, sediment, and sludge could pose a health threat to humans or the environment. A relatively low diversity of plant species is observed along the banks of the western lagoon. The concentration of contaminants in surface water and sediments from either CD #30 or the lagoons may pose a threat to the sensitive aquatic species of plants and animals. The chemicals of interest that have been identified as potentially hazardous to human health and the environment at the NBIA site are shown below (Table 1).

TABLE 1: CHEMICALS OF INTEREST AT NBIA SITE

Chemical of Interest	Groundwater	Surface Water	Soil	Lagoon Sludge	Sediment
Arsenic			x		x
Cadmium		x	x	x	x
Chromium	x	x		x	x
Copper	x		x		x
Cyanide compounds	x	x	x	x	x
Lead	x	x	x	x	
Mercury		x			
Nickel	x	x			x
1,2-dichloroethene (1,2-DCE)	x	x	x	x	x
Trichloroethene (TCE)	x		x		x
Dichloroethene (DCE)	x		x		x
Vinyl Chloride (VC)	x		x		x
Polychlorinated Biphenyls (PCBs)				x	x
Polycyclic Aromatic Hydrocarbons (PAHs)			x	x	x

The EPA issued a ROD in June 1998 and an explanation of significant differences (ESD) in September 2008. The selected remedy in the ROD includes consolidation of contaminated soils into one area of the western lagoons, dredging sediments from CD #30 with consolidation in that area as well, and construction of a wetland to treat groundwater from the lagoon area (EPA 1998). Work conducted as part of the pre-design studies showed possible problems with the implementation of the constructed wetland approach for groundwater treatment, and a possible modification of consolidation of lagoons and possible stabilization/solidification. Therefore, EPA issued an ESD, September 26, 2008, providing for significant

changes to the remedy described in the ROD (EPA 2008). As explained in the ROD and ESD, current cleanup plans include:

- Possible consolidation of eastern lagoons into western lagoons and soil stabilization/solidification
- Soil stabilization/solidification of eastern and western lagoons, if kept separate
- Construct and maintain cover over lagoon areas
- Fence and mark lagoons with permanent site markers, as needed
- Provide access controls, as appropriate
- Place enforceable restrictions on future land use and groundwater use for eastern and western lagoons
- Dredge sediment from CD #30
- Monitoring groundwater and surface water to assess the effectiveness of the remedy

Any modification to the original groundwater remedy selected in the ROD (EPA 1998) will be addressed though a future ROD amendment.

TABLE 2: POTENTIALLY RESPONSIBLE PARTIES AT NBIA SITE

Name[1]	Address
Bronson Plastics, Incorporated	404 Union Street, Bronson, MI 49028
Bronson Plating Company	135 Industrial Avenue, Bronson, MI 49028
Bronson Precision Products, Incorporated	505 N. Douglas Street, Bronson, MI 49028
Bronson Products Company	304 North State Street, Bronson, MI 49028
Bronson Specialties, Incorporated	404 Union Street, Bronson, MI 49028
City of Bronson	141 S. Matteson Street, Bronson, MI 49028
Douglas Components Corporation	141 Railroad St., Bronson, MI 49028
Kuhlman Corporation	2565 N. Maple Rd., Troy, MI 48084
Marmon Group, Incorporated	39 S. LaSalle Street, Chicago, IL 60603
Scott Fetzer Company, Incorporated	28800 Clemens Rd., Westlake, OH 44145

Notes:
The number of PRPs listed above, from EPA's PRP database, may vary from the total count, derived from EPA's Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database.
1. PRPs identified by EPA

1.2 Purpose

The purpose of this WA is to provide remedial design (RD) oversight at the NBIA site. The ROD defines the selected remedy for the site (EPA 1998) and the ESD defines the modifications to the ROD (EPA 2008). SulTRAC will help to ensure that the remedies specified in the RD are protective of human health and the environment for the entire duration of the project, which includes planning, implementation, and completion phases. SulTRAC will also assess whether the implementation of the remedies is in compliance with the terms of the settlement agreement. The PRPs will perform all activities for implementation of the RD.

1.3 General Requirements

SulTRAC will provide oversight of the RD as specified in the ROD (EPA 1998), ESD (EPA 2008), and in accordance with the SOW (EPA 2011). SulTRAC will furnish all necessary and appropriate personnel, including subcontractors, materials, and services for, or incidental to, oversight of the RD. SulTRAC will document that the PRP's RD and associated deliverables required under this WA are consistent with the settlement agreement, the ROD, the Remedial Design/Remedial Action (RD/RA) Handbook (EPA Office of Solid Waste and Emergency Response (OSWER) 9355.0-04B, EPA 540/R-95/059, June 1995), and all other guidance used by EPA in conducting an RD.

In conducting the WA, SulTRAC will propose the most appropriate and cost-effective procedures and methodologies using accepted engineering practices and controls. SulTRAC will endeavor to perform services and provide products at the lowest reasonable cost. If there are changes to the SOW by the EPA, the EPA will issue a formal amendment to the SOW and will negotiate the cost of the amendment with SulTRAC to form a new cost estimate.

SulTRAC will communicate as appropriate with the EPA work assignment manager (WAM), either in face-to-face meetings or through conference calls. SulTRAC understands that acceptance of deliverables by EPA does not relieve the contractor from responsibility for the adequacy of its deliverables or its professional responsibilities. The EPA and SulTRAC contacts for this WA are listed below.

EPA Primary Contact: Mr. James Hahnenberg, EPA Region 5 Remedial Project Manager, WAM; (312) 353-4213 or Hahnenberg.James@epa.gov;
mailing address: EPA Region 5, 77 West Jackson Boulevard, (SR-6J) Chicago, IL 60604

EPA Secondary Contact: Ms. Pankaj Parikh, EPA Region 5 Project Officer (PO), (312) 886-6707 or parikh.pankaj@epa.gov; facsimile: (312) 692-2982;
mailing address: EPA Region 5, Mail code SM-5J, 77 West Jackson Boulevard, Chicago, IL 60604

SulTRAC Project Manager: Mr. Greg Haas, (517) 599-1875 or ghaas@onesullivan.com, facsimile (312) 443-0557;
mailing address: Sullivan International Group, Inc., 125 South Wacker Drive, Suite 220, Chicago, IL 60606

SulTRAC Program Manager: Ms. Mindy Gould, (312) 201-7460 or mindy.gould@tetratech.com ; facsimile (312) 201-0031;
mailing address: Tetra Tech EM, Inc., 1 South Wacker Drive, 37th Floor, Chicago, IL 60606

2.0 PROJECT APPROACH

The EPA SOW (EPA 2011) identifies the following 11 tasks under the RD oversight WA:

Task 1—Work Planning and Support

Task 2—Community Involvement

Task 3—Field Investigation/Data Acquisition (N/A)

Task 4—Sample Analysis (N/A)

Task 5—Analytical Support and Data Validation (N/A)

Task 6—Reuse Planning

Task 7—Data Evaluation (N/A)

Task 8—Review of PRP RD Submittals

Task 9—Remedial Design Oversight

Task 10—Technical Meeting Support

Task 11—Work Assignment Closeout

Tasks and subtasks identified as not applicable (N/A) to this WA are not discussed further in this work plan.

The following sections describe SulTRAC's technical approach for completing the activities required under each applicable task, present SulTRAC's estimates of level of effort (LOE) hours required to perform each task, and discuss the assumptions used in estimating LOE hours and costs.

TASK 1 – WORK PLANNING AND SUPPORT

This work element involves planning the execution and overall management of this WA. The EPA SOW identifies four subtasks to be completed as part of the overall planning and support task as follows:

Subtask 1.1—Work Plan

Subtask 1.2—Review PRP Plans

Subtask 1.3—Preparation of Site-Specific Plans

Subtask 1.5—Project Management and Reporting

The following sections of this work plan discuss SulTRAC's understanding of and technical approach to completing each subtask, present SulTRAC's estimated costs to perform the activities included in each subtask, and present the assumptions used to derive those estimated costs. Table A-1 in the Appendix

presents the total estimated costs for labor, travel, equipment, and other direct costs (ODCs) associated with completing Task 1.

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
86	372	16	20	494	59	$200	$185	$0	$57,490

The following sections discuss further details of the Task 1 subtask components.

Subtask 1.1 – Work Plan

SulTRAC will prepare and submit a work plan for RD oversight that includes a detailed description of implementation activities, performance monitoring, and overall management strategy, including optimization, for the RD oversight. Task 1 includes the following efforts related to project initiation.

- **Prepare Work Plan** — SulTRAC prepared and submitted this work plan on or before June 28, 2011, as stated in the SOW (EPA 2011). SulTRAC used information from the appropriate EPA guidance and technical direction provided by the EPA WAM as the basis for preparing the work plan. SulTRAC's RD oversight work will be coordinated and properly sequenced with EPA and any document submittals of the PRP, if applicable. SulTRAC is submitting this work plan electronically to the EPA Region 5 WAM, PO and contracting officer (CO), as requested at the kickoff meeting. SulTRAC's LOE hour estimates for the preparation this work plan are presented below.

  This work plan includes a comprehensive description of project tasks, the procedures to accomplish the tasks, project documentation, and a project schedule. SulTRAC will use existing quality assurance and quality control (QA/QC) systems and procedures to assure that the work plan and other deliverables are of professional quality, requiring only minor revisions. Specifically, the work plan includes the following:

  - Identification of RD oversight project elements and the associated tasking.
  - SulTRAC's technical approach to each task to be performed, including a detailed description of each task, assumptions used, information to be produced during and at the conclusion of each task, and a description of work products to be submitted to the EPA. Information will be presented in a sequence consistent with the SOW (EPA, 1998).
  - A schedule (see Section 3.0) with specific dates for completing each required activity and submitting each deliverable required in the SOW.

P4	P3	P2	P1	Total LOE	CL
12	24	6	0	40	4

- **Revise Work Plan**—SulTRAC will attend a work plan fact-finding/negotiation meeting via teleconference with EPA. SulTRAC will prepare and submit a revised work plan incorporating the agreements made in the finding/negotiation meeting. SulTRAC is including the LOE estimates in the cost box below.

P4	P3	P2	P1	Total LOE	CL
2	8	2	0	14	2

- **Prepare Conflict-of-Interest Disclosure**—As required in the EPA SOW, SulTRAC prepared and submitted its conflict-of-interest (COI) disclosure to EPA on March 6, 2007.

Subtask 1.2 – Review PRP Plans

This task includes reviewing and providing comments on PRP planning documents. SulTRAC will review PRP health and safety plan (HASP), field sampling plans (FSP), and other miscellaneous documents. SulTRAC estimates that four to six plans and other miscellaneous documents will require review.

P4	P3	P2	P1	Total LOE	CL
8	72	8	0	88	6

Subtask 1.3 — Preparation of Site Specific Plans

This task includes reviewing existing site-specific plans and preparing, updating, and/or maintaining plans in accordance with the applicable guidance as necessary for the oversight of the RD. SulTRAC will prepare and update a site-specific HASP that specifies employee training, protective equipment, medical surveillance requirements, standard operating procedures, and a contingency plan in accordance with 29 CFR 1910.120 1(1) and (1)(2).

P4	P3	P2	P1	Total LOE	CL
4	8	0	20	32	2

Subtask 1.5 – Project Management and Reporting

SulTRAC will perform general WA management activities, including communications with WAM, managing and tracking costs, preparing monthly progress reports, attending project meetings, attending EPA-held training and audits, preparing and submitting invoices, and accommodating any external audit, as required. The anticipated period of performance for this project is June 29, 2011 through December 31, 2013 (30 months).

SulTRAC will perform the following activities required to effectively manage the WA:

- **Prepare monthly reports, track costs, and submit invoices**—As part of this subtask, SulTRAC will provide general coordination and communication for the project. SulTRAC will prepare monthly progress reports in accordance with contract requirements. SulTRAC will document the technical progress and status of each task in the work breakdown structure (WBS) for the reporting period in accordance with contract requirements. SulTRAC will report costs, LOE hours (by P level) for the reporting period, as well as cumulative amounts expended to date. SulTRAC will track costs, and monthly invoices will be prepared and submitted in accordance with the level of detail specified in the contract. SulTRAC will track and report LOE hours and costs by operable unit. SulTRAC has estimated 10 LOE hours and 1.5 clerical hours per month for the performance period of 30 months for this subtask.

P4	P3	P2	P1	Total LOE	CL
60	240	0	0	300	45

- **Participate in progress meetings**—SulTRAC will participate in progress and technical meetings during the course of the WA. As identified in the WA, SulTRAC will assume one meeting, with two people in attendance, for 4 hours at the NBIA Site. A six-hour round trip from Chicago, IL and three-hour round trip from Holt, MI travel time, and 3 hours of preparation time are included in our estimate.

P4	P3	P2	P1	Total LOE	CL
0	20	0	0	20	0

In accordance with the RAC 2 contract, 3.5 percent of the total cost of each WA will be available for the non site-specific program management budget.

TASK 2 – COMMUNITY INVOLVEMENT

SulTRAC will provide community involvement technical support to EPA at two public meetings throughout the RD phase. As indicated in the WA, one SulTRAC personnel will attend the public/availability sessions. SulTRAC will spend up to four hours preparing for each meeting and three hours at the public meeting. Three-hour round trip travel time is included in this task for SulTRAC personnel.

This task includes technical support provided by SulTRAC during public/availability meetings under the associated community involvement work assignment. SulTRAC will provide community involvement support to the EPA in accordance with the *National Oil and Hazardous Substances Pollution Contingency Plan* (NCP, 40 CFR Part 300) and the *Community Relations in Superfund – A Handbook* (EPA, Office of Emergency and Remedial Response, OSWER Directive No. 9230.0-3C, January 1992).

As specified in the SOW, SulTRAC has estimated one community meeting with two personnel attending. Including travel time and preparation, SulTRAC estimates 10 LOE hours per person.

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
0	20	0	0	20	0	$200	$17	$0	$2,437

TASK 6 – REUSE PLANNING

SulTRAC will review and evaluate reuse and redevelopment plans submitted by the PRPs to ensure effectiveness and long-term protectiveness of the remedies discussed in the RD. As specified in the SOW, SulTRAC has estimated that 40 LOE hours will be required for the PM (P3) to review reuse and redevelopment plans.

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
0	40	0	0	40	0	$0	$6	$0	$4,363

TASK 8 – REVIEW OF PRP REMEDIAL DESIGN SUBMITTALS

SulTRAC will review and provide comments on documents modified or developed by the PRP during the implementation of RD oversight. All comments generated during the technical review will be presented in the form of a technical memorandum. The following factors will be considered during document review:

- Technical requirements of the ROD, consent decree SOW, and applicable or relevant and appropriate requirements
- Standard professional engineering practices
- Applicable statutes, EPA policies, directives, and regulations
- Spot-checking design calculations to assess accuracy and quality of design activities and conformance with results of field data and treatability studies
- Examination of planning and construction schedules for meeting project completion goals
- Operability, constructability, and environmental compliance reviews

If required, SulTRAC will review and comment on the PRP documents and PRP response to comments. These documents may include:

- Interim results deliverables — SulTRAC will review and provide comments on any PRP interim design deliverables, such as treatability study work results and associated reports.
- Other non-specific PRP design deliverables — As specified in the SOW, SulTRAC has estimated 80 LOE for this effort.
- Preliminary Design Documents — These types of documents typically include the project delivery strategy and schedule, preliminary construction schedule, specifications outline, preliminary drawings, basis of design report/design analysis, preliminary cost estimate, and PRP description of variances with the ROD.
- Intermediate Design Documents — These types of documents typically include the construction schedule, preliminary specifications, intermediate drawings, basis of design report/design analysis, revised cost estimate, and PRP variances with the ROD.
- Pre-Final Design Documents — These types of documents typically include the pre-final design specifications, pre-final drawings, basis of design report/design analysis, and revised cost estimate.
- Final Design Documents — These types of documents typically include the final design specifications, final drawings, basis of design report/design analysis, and final cost estimate.
- PRP subcontract award document(s)

SulTRAC estimates that 30 hours apiece will be required to review preliminary, intermediate, pre-final, and final design deliverable packages; and 20 hours apiece will be required to review interim design, pre-design, and subcontract award documents, and 80 hours will be required to review non-specific deliverables, as specified in the SOW, for a total of 260 hours. SulTRAC has estimated that the documents will require approximately 40 LOE hours of senior technical review, 180 hours of PM (P3) review and coordination, and 40 hours of junior engineer review to check calculations and the like. In addition, SulTRAC estimates that 8 P4 hours for QC and 24 clerical hours will be required to format and archive document.

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
48	180	40	0	268	24	$0	$81	$0	$30,239

TASK 9 – REMEDIAL DESIGN OVERSIGHT

SulTRAC will provide technical oversight of PRP field activities to ensure that pre-design field work takes place in accordance with EPA accepted plans and specifications. The amount of oversight will be dependent upon the type and complexity of the Treatability Study or Pre-Design Field Investigation. Oversight activities will include:

- Make observations regarding the manner in which the quality assurance project plan and HASP are implemented.
- Maintain a field log book with appropriate photographs.
- Report any nonconformance issues to the EPA WAM.

As specified in the SOW, the oversight activities will take place over two, 2-week events. SulTRAC has estimated 50 hours per week for one person conducting oversight. Three hours preparation and three-hours round trip travel time and overnight stays are included for field oversight.

SulTRAC will provide RD oversight letter reports once every two weeks during the duration of the PRPs' field work. Oversight reports will consist of a short summary of significant field events during the period, photographs taken during the period, and a copy of all field logs. Each oversight report will be submitted 30 calendar days after each two-week period and is anticipated to be 3 pages in length, plus copies of field logs and photographs. Each oversight report will require the field oversight personnel 16 hours to prepare, and will require 4 hours of senior technical review and 2 hours of clerical time to format and archive.

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
8	250	0	0	258	4	$4,460	$49	$0	$33,848

TASK 10 – TECHNICAL MEETING SUPPORT

SulTRAC will attend and document technical meetings with EPA, the PRPs, the PRP contractor(s), and the State agency. As specified in the SOW, SulTRAC has estimated four meetings for budgeting purposes. Meetings will be held at the site and are expected to last approximately a half day. Two SulTRAC personnel will be in attendance at each of these meetings. SulTRAC estimates 4 hours per meeting, plus 2 hours preparation per person. SulTRAC estimates that the PM (P3) will attend each meeting and personnel from Chicago will also attend each meeting (a P4 at two meetings and a P2 at the other two). No overnight stays have been included in this cost estimate, but 3 hours round trip travel time will be required for the PM (P3) and 6 hours round trip travel time will be required for Chicago-based personnel.

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
24	36	24	0	84	0	$800	$13	$0	$9,891

TASK 11 – WORK ASSIGNMENT CLOSEOUT

SulTRAC will perform the necessary activities to closeout the WA in accordance with the contract requirements. Typical activities include, but are not limited to:

- Package and return documents to government
- Duplication/distribution/storage of files
- Preparation of the WA closeout report (WACR)

SulTRAC will prepare the WACR in accordance with regional guidance or other procedures as specified in the WA. In circumstances where the final hours/budget are greater than the +/- 20% of the approved work plan hours/budget, SulTRAC will provide an explanation for the underage/overage.

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
8	10	0	8	26	8	$0	$8	$0	$3,033

3.0 SCHEDULE

The schedule for this WA is based on SulTRAC's work and sampling schedule. The major deliverables and a suggested schedule for submittals for the RD at the NBIA Site are presented in Table 3 below.

TABLE 3: PROPOSED MAJOR DELIVERABLES AND SCHEDULE

DELIVERABLE	NUMBER OF COPIES	DUE DATE
Task 1.1 –Remedial Design (RD) Oversight Work Plan	3	No later than June 28, 2011
Task 1.1 –Revised Work Plan	3	15 days after receipt of comments or negotiation meeting
Task 1.1 – Conflict of Interest Disclosure	3	Submitted March 6, 2007
Task 1.2 – Comments on PRP Site Management Plan, FSP, HASP, and Contingency Plan	2	21 days after receipt of documents
Task 1.3 – Health and Safety Plan	2	30 days after work plan approval
Task 1.5 – Monthly Progress Reports	3	As provided for in the Contract
Task 8 – Letter Report Summarizing Review of PRPs' RD Documents	2	21 days after receipt of PRP document from EPA
Task 8 – Review of PRP Response to Comments	2	10 days after receipt of PRP response
Task 9 – Periodic Reports	2	TBD
Task 11 – Work Assignment Completion Report (WACR)	3	45 days after receipt of the Work Assignment Closeout Notification (WACN)
Task 11 – Final Costs Documented in WACR	3	90 days after receipt of WACN

Note:
The work plan will be submitted electronically in Adobe portable document format (pdf) to the EPA PO, CO, and WAM. All project deliverables will be submitted to the EPA WAM in electronic formats. Hard copies will be provided as requested by EPA.

4.0 QUALITY CONTROL

SulTRAC's internal quality control (QC) process requires that all project deliverables be reviewed to promote technical adequacy and completeness. SulTRAC's quality assurance (QA) manager or designee not associated with the WA will perform internal QC checks of WA activities. Internal QC checks will address adherence to this work plan and SulTRAC's QA program plan for RAC 2. The cost of QC reviews is included in the cost estimate for this WA.

5.0 COST ESTIMATE

The estimated LOE hours and dollars required for SulTRAC to complete the work under WA 121-ROBE-051C, RD Oversight at North Bronson Industrial Area Superfund Site, Bronson County, Michigan are 1,190 LOE hours and $146,247, respectively, including the program management fee and project mobilization allocation. These totals are based on the EPA SOW and WA, as well as discussions with the WAM. To develop the cost estimate, SulTRAC used estimated labor rates under RAC 2. Appendix A summarizes the total project costs (Table A-1), proposed staffing plan (Table A-2), travel plan (Table A-3), and other direct costs (Table A-4).

6.0 REFERENCES

United States Environmental Protection Agency (EPA). 1998. "EPA Superfund Record of Decision: North Bronson Industrial Area". June.

EPA. 2008. "EPA Explanation of Significant Differences: North Bronson Industrial Area". September 26.

EPA. 2011. "RAC II Region 5 Statement of Work for Remedial Design Oversight, North Bronson Area Superfund Site, Bronson County, Michigan". WA 121-ROBE-051C. Effective June 29.

APPENDIX A

PROPOSED COST ESTIMATE

(Four Pages)

TABLE A-1

TOTAL ESTIMATED COST
SulTRAC - June 2011

Work Assignment Name: North Bronson Industrial Area RD Oversight
Work Assignment No: 121-ROBE-051C

Task Name:	Work Planning and Support	Community Involvement	Reuse Planning	Review of PRP RD Submittals	Remedial Design Oversight	Technical Meeting Support	WA Close-out	
Task Number:	TASK 1	TASK 2	TASK 6	TASK 8	TASK 9	TASK 10	TASK 11	**TOTAL**
TETRA TECH LABOR ESTIMATE - HOURS								
P4	34	0	0	8	4	0	2	**48**
P3	0	0	0	0	0	0	0	**0**
P2	0	0	0	0	0	0	0	**0**
P1	0	0	0	0	0	0	0	**0**
Clerical	17	0	0	0	0	0	0	**17**
Total Tt Professional Hours (a)	34	0	0	8	4	0	2	**48**
Total Tt Clerical(a)	17	0	0	0	0	0	0	**17**
SULLIVAN LABOR ESTIMATE - HOURS								
P4	52	0	0	40	4	24	6	**126**
P3	372	20	40	180	250	36	10	**908**
P2	16	0	0	40	0	24	0	**80**
P1	20	0	0	0	0	0	8	**28**
Clerical	42	0	0	24	4	0	8	**78**
Total Sullivan Professional Hours (a)	460	20	40	260	254	84	24	**1,142**
Total Sullivan Clerical Hours (a)	42	0	0	24	4	0	8	**78**
Total SulTRAC Professional Hours (a)	494	20	40	268	258	84	26	**1,190**
Total SulTRAC Clerical Hours (a)	59	0	0	24	4	0	8	**95**
Total Tetra Tech Professional Labor Cost	$1,830	$0	$0	$430	$215	$0	$108	**$2,583**
Total Sullivan Professional Labor Cost	$20,184	$881	$1,762	$11,299	$11,233	$3,608	$957	**$49,924**
Total Tetra Tech Clerical Labor Cost	$373	$0	$0	$0	$0	$0	$0	**$373**
Total Sullivan Clerical Labor Cost	$874	$0	$0	$500	$83	$0	$167	**$1,624**
Total Tetra Tech Labor Cost	$2,203	$0	$0	$430	$215	$0	$108	**$2,956**
Total Sullivan Labor Cost	$21,058	$881	$1,762	$11,799	$11,316	$3,608	$1,124	**$51,548**
Total SulTRAC Labor Cost	$23,261	$881	$1,762	$12,229	$11,531	$3,608	$1,232	**$54,504**
Total Tetra Tech Travel Cost (b)	$0	$0	$0	$0	$0	$0	$0	**$0**
Total Sullivan Travel Cost (b)	$200	$200	$0	$0	$4,460	$800	$0	**$5,660**
Total Tetra Tech Other Direct Costs(ODC)(c	$103	$0	$0	$16	$7	$0	$3	**$129**
Total Sullivan Other Direct Costs (ODC) (c)	$82	$17	$6	$65	$42	$13	$5	**$230**
Total Tetra Tech Equipment (d)	$0	$0	$0	$0	$0	$0	$0	**$0**
Total Sullivan Equipment (d)	$0	$0	$0	$0	$0	$0	$0	**$0**
SulTRAC indirect costs - Non-Subpool	$30,744	$1,208	$2,360	$16,298	$15,983	$4,937	$1,629	**$73,159**
Tetra Tech Subpool Cost (e)	$0	$0	$0	$0	$0	$0	$0	**$0**
Sullivan Subpool Cost (e)	$0	$0	$0	$0	$0	$0	$0	**$0**
SulTRAC indirect costs - Subpool	$0	$0	$0	$0	$0	$0	$0	**$0**
Subtotal Cost	$54,390	$2,306	$4,128	$28,608	$32,023	$9,358	$2,869	**$133,682**
Fixed fee - Non-Subpool	$3,100	$131	$235	$1,631	$1,825	$533	$164	**$7,620**
Fixed fee - Subpool	$0	$0	$0	$0	$0	$0	$0	**$0**
Total Cost to Complete	$57,490	$2,437	$4,363	$30,239	$33,848	$9,891	$3,033	**$141,302**

Notes:

(a) See Table A-2 for a breakdown of SulTRAC's Staffing Plan.
(b) See Table A-3 for a breakdown of SulTRAC's Travel Costs.
(c) See Table A-4 for a breakdown of SulTRAC's Other Direct Costs.

Program Management @ 3.5% of Total Cost	**$4,946**
Total Cost, with Program Management	**$146,247**

TABLE A-2
PROPOSED STAFFING PLAN

SulTRAC - June 2011

Work Assignment Name: North Bronson Industrial Area RD Oversight **Work Assignment No.:** 121-ROBE-051C

Task No.: Task Name:	Tetra Tech					Sullivan					SulTRAC Total					
	P4	P3	P2	P1	CL	P4	P3	P2	P1	CL	P4	P3	P2	P1	LOE	CL
1.1 Work Plan	4	0	0	0	2	10	32	8	0	4	14	32	8	0	54	6
1.2 Review PRP Plans	0	0	0	0	0	8	72	8	0	6	8	72	8	0	88	6
1.3 Preparation of Site Specific Plans	0	0	0	0	0	4	8	0	20	2	4	8	0	20	32	2
1.5 Project Management & Reporting	30	0	0	0	15	30	260	0	0	30	60	260	0	0	320	45
Task 1 Work Planning and Support	**34**	**0**	**0**	**0**	**17**	**52**	**372**	**16**	**20**	**42**	**86**	**372**	**16**	**20**	**494**	**59**
Task 2 Community Involvement	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**20**	**0**
Task 6 Reuse Planning	**0**	**0**	**0**	**0**	**0**	**0**	**40**	**0**	**0**	**0**	**0**	**40**	**0**	**0**	**40**	**0**
Task 8 Review of PRP Submittals	**8**	**0**	**0**	**0**	**0**	**40**	**180**	**40**	**0**	**24**	**48**	**180**	**40**	**0**	**268**	**24**
Task 9 Remedial Design Oversight	**4**	**0**	**0**	**0**	**0**	**4**	**250**	**0**	**0**	**4**	**8**	**250**	**0**	**0**	**258**	**4**
Task 10 Technical Meeting Support	**0**	**0**	**0**	**0**	**0**	**24**	**36**	**24**	**0**	**0**	**24**	**36**	**24**	**0**	**84**	**0**
Task 11 Work Assignment Closeout	**2**	**0**	**0**	**0**	**0**	**6**	**10**	**0**	**8**	**8**	**8**	**10**	**0**	**8**	**26**	**8**
TOTAL HOURS	**48**	**0**	**0**	**0**	**17**	**126**	**908**	**80**	**28**	**78**	**174**	**908**	**80**	**28**	**1190**	**95**

TABLE A-3
PROPOSED TRAVEL PLAN

SulTRAC - June 2011

WA Name: North Bronson Industrial Area RD Oversight **Work Assignment No.: 121-ROBE-051C**

Origin/Des	Purpose	No.of People	No. of Trips Per Person	No.of Days Per Trip	Round Trip Airfare ($/trip/person)	Per Diem (a) ($/day/person)	Ground Trans/Misc (b ($/day)	Est. Total Cost ($)
								$0
No Tetra Tech travel is anticipated for this task.								$0
								$0
Total Tetra Tech Travel for Task No. 1								**$0**
								$0
No Tetra Tech travel is anticipated for this task.								$0
								$0
Total Tetra Tech Travel For Task No. 2								**$0**
								$0
No Tetra Tech travel is anticipated for this task.								$0
								$0
Total Tetra Tech Travel For Task No. 9								**$0**
								$0
No Tetra Tech travel is anticipated for this task.								$0
								$0
Total Tetra Tech Travel For Task No. 10								**$0**
							Total Tetra Tech Travel	**$0**
TOTAL TRAVEL								**$5,660**

Origin/Destination	Purpose	No.of People	No. of Trips Per Person	No. of Days Per Person Per Trip	Round Trip Airfare ($/trip/person)	Per Diem (a) ($/day/person)	Ground Trans/Misc (b) ($/day)	Est. Total Cost ($)
								$0
Holt/Bronson, MI	Progress Meeting	1	1	1			$100	$100
Chicago/Bronson	Progress Meeting	1	1	1			$100	$100
Total Sullivan Travel For Task No. 1								**$200**
Holt/Bronson, MI	Community Meeting	1	1	1			$100	$100
Chicago/Bronson	Community Meeting	1	1	1			$100	$100
								$0
Total Sullivan Travel For Task No. 2								**$200**
								$0
Holt/Bronson, MI	RD Field Oversight	1	4	5		$123	$100	$4,460
								$0
Total Sullivan Travel For Task No. 9								**$4,460**
								$0
Holt/Bronson, MI	Technical Meetings	1	4	1			$100	$400
Chicago/Bronson	Technical Meetings	1	4	1			$100	$400
Total Sullivan Travel For Task No. 10								**$800**
							Total Sullivan Travel	**$5,660**

Notes:

(a) The SulTRAC team is required to follow the requirements of Subpart 31.2 of the Federal Acquisition Regulations (FAR) and federal travel regulations in incurring allowable travel costs under this contract and correspondingly must at all times seek and obtain the lowest rates, including government rates (when available), and observe subsistence ceilings. Per diem is based on rates for lodging, meals, and incidental expenses stated in FAR 31.205-46(a)(3). Allegan, MI $77/46

(b) Ground transportation assumes $100 per week for car rental plus miscellaneous expenses for fuel, parking, and tolls
Ground transportation assumes $0.485 per mile if a personal car is used.

TABLE A-4
OTHER DIRECT COSTS

SulTRAC - June 2011

Work Assignment Name: **North Bronson Industrial Area RD Oversight**
Work Assignment No.: **121-ROBE-051C**

		Work Planning and Support		Community Involvement		Reuse Planning		Review of PRP RD Submittals		Remedial Design		Technical Meeting		WA Close-out		Total ODC Cost	
Task Name																	
Task Number		TASK 1		TASK 2		TASK 6		TASK 8		TASK 9		TASK 10		TASK 11		Total Task	
Item	Unit Cost	No. of Units	Cost	No. of Units	Cost	No. of Units	Cost	No. of Units	Cost	No. of Units	Cost	No. of Units	Cost	No. of Units	Cost	No. of Units	Cost
Tetra Tech																	
Copying (a)	$0.14		$0		$0		$0		$0		$0		$0		$0		$0
Telephone (b)	$5.00		$0		$0		$0		$0		$0		$0		$0		$0
Office supplies (c)	$0.15	51	$8	0	$0	0	$0	8	$1	4	$1	0	$0	2	$0	65	$10
Shipping (d)	$25.00		$0		$0		$0		$0		$0		$0		$0		$0
Other (e)	$1.00		$0		$0		$0		$0		$0		$0		$0		$0
Computer (f)	$3.08	31	$95	0	$0	0	$0	5	$15	2	$6	0	$0	1	$3	39	$120
Tetra TechTotal			**$103**		**$0**		**$0**		**$16**		**$7**		**$0**		**$3**		**$129**
Sullivan																	
Copying (a)	$0.14	50	$7	100	$14		$0	160	$22	20	$3		$0		$0	330	$46
Office supplies (c)	$0.15	502	$75	20	$3	40	$6	284	$43	258	$39	84	$13	32	$5	1,220	$183
Shipping (d)	$25.00		$0		$0		$0		$0		$0		$0		$0		$0
Other (e)	$1.00		$0		$0		$0		$0		$0		$0		$0		$0
SullivanTotal			**$82**		**$17**		**$6**		**$65**		**$42**		**$13**		**$5**		**$230**

Notes:

(a) Copying	SulTRAC assumes $0.14 per page.
(b) Telephone	There are no telephone costs in this cost estimate.
(c) Office supplies	SulTRAC assumes office supplies at the rate of $0.15 per labor hour
(d) Shipping	SulTRAC assumes shipping at $25.00 per parcel.
(e) Other	There are no other costs in this cost estimate.
(f) Computer	Computer usage charges are calculated at 60% of Tetra Tech LOE